The Sacramento Medical Times.

Vol. I. AUGUST, 1887. No. 6.

ORIGINAL ARTICLES.

ALBUMINURIA AND ITS BEARING ON LIFE INSURANCE.

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When we consider that nearly all physicians are liable to be called upon at any moment to examine applicants for life insurance, and that more skill and judgment are required in the thorough and conscientious performance of that duty than in any other of the various departments of their profession, no apology need be offered for presenting a few observations upon the subject. In ordinary practice the physician has usually but to determine the cause of the evidences of disease, and his diagnosis and line of treatment become apparent. The surgeon dresses a fracture, amputates a limb, ligates an artery, excises a morbid growth, or performs some other operation, all of which may require much skill and dexterity; yet, as a rule, the evidences necessitating the performance thereof are so obvious that "he that runneth may read." The oculist enucleates an eye, performs an iridectomy, extracts a cataract, treats granular lids, or performs some other office for his patient, the cause of which is usually so apparent as to leave no ambiguity regarding the course to be pursued, and so it is throughout the various departments of our art.

The medical examiner in life insurance, however, has to determine by careful inquiry all of the data upon which to build a theory as to the probable presence in the system of his client of any deviation from the normal standard. His patient comes to him for the purpose of obtaining his certificate of present good health, and the probability that he will outlive a given number of years. And while occasionally an applicant will be encountered who will not only present his

full family and personal history truthfully, but will even greatly exaggerate the most trivial ailment, yet applicants not infrequently withhold the whole truth and avoid the relation of anything which would be likely to debar them from obtaining the insurance applied for. The medical examiner should therefore not only be thoroughly competent in all of the departments of his profession, but should be possessed of tact and acumen of an extraordinary character to enable him to propound such questions as will elicit (perhaps unconsciously to the applicant) a complete medical history of the individual and his family, past and present. The evidences of former diseases and injuries may have entirely disappeared to all outward observation, yet a critical examination may not only enable him to determine the presence of incipient disease, but the evidences of former organic lesions and injuries may be thereby revealed which are of vital importance. The probable effects of such lesions upon the life expectancy of the applicant should be carefully estimated by the examiner, and his opinion of the desirability of the risk given accordingly. Nothing should be taken for granted, but the most thorough and painstaking analysis of all the concommitant circumstances attending the case should be taken into the calculation.

The theory of life insurance being predicated upon the *selection* of risks, and the premium annually paid being calculated upon the assumption that those upon whose lives policies are written are in the enjoyment of good health and free from constitutional disease, it follows that when unsound risks are accepted the company issuing policies of insurance thereon must be a loser. It is my special purpose in this paper to refer to but one of the many important factors in the problem which should be taken into consideration by medical examiners in their selection of risks, and in their efforts to form a just estimate of the state of health and chances of longevity of all applicants for the benefits of life insurance.

I premise, however, by saying that there are always three principal factors in the problem which should be carefully considered in all their bearings by medical examiners—(1) family history, (2) personal history, and (3) present personal condition—and they are of significance in the order in which they are here enumerated. Given, for example, an applicant

whose family history is defective and has consumption cropping out in several of his predecessors as well as in his immediate relatives, yet whose physique is perfect, and whose personal history and present condition are faultless, the chances of such an individual's reaching his expectancy are not equal to the applicant's in whose family history there is no predisposition to constitutional disease, even should his personal history and present condition indicate a less robust constitution, or even should his occupation and residence be less favorable or conducive to longevity. While, however, the existence of consumption in the family history of applicants is usually quite readily determined, and can therefore be guarded against to a certain extent, there are other important affections which, although less common, are nevertheless of sufficiently frequent occurrence to demand the most careful scrutiny by special examination.

Foremost amongst them is albuminuria; and I will endeavor to show a correct estimate of its significance from a life insurance stand-point, as it is one of the most difficult and important questions which the medical examiner is called upon to determine. For while the presence of albumin in the urine of one individual may be the precursor of certain premature death, in another it may simply be evidence of a recent cantharidal application, a severe mental effort, over-indulgence, especially in highly albuminous food such as white of raw eggs; the presence of stone in the bladder, cystitis, pyelitis, pneumonia, bronchitis, diphtheria, scarlatina, rheumatism, or even a slight accidental and transient hæmorrhage into the bladder. During any of these conditions, the presence of albumin in the urine may frequently be detected, and should the medical examiner pursue his inquiry no further, the chances are at least ninety-nine in a hundred that the wise protection which the applicant desired to make for his family in case of his premature death would be unjustifiably denied him, while he would most likely be dismissed with the conviction that he was afflicted with an incurable disease, and that at most he had but a few years to live. A careful consideration of the history of the case, however, together with a thorough chemical and microscopical examination of the urine, would enable the examiner to differentiate more closely, and would not infrequently demonstrate the transience of the albumin, and its utter unre-

liability as evidence of organic disease of the kidneys. The medical examiner should therefore inquire diligently into all the circumstances attending the history of the individual, and should *know* that the albumin is persistent, that it is excreted simultaneously with the urine, and that it is consequent upon structural renal changes, before recording his final opinion. And where the examiner is the usual medical attendant of the applicant—a not uncommon circumstance—he should even go farther and examine his blood for the purpose of determining the extent to which it is deficient in coloring matter; for in such cases it is not sufficient to base conclusions upon the mere palor of the complexion, as that would but approximate the extent of the deficiency of the blood globules, and of the danger of speedy dissolution either from the direct effects of the morbid condition itself, or from intercurrent disease to which his condition rendered him so liable.

It is therefore apparent that the mere presence of albumin in the urine of an applicant for life insurance is not sufficient evidence upon which to base the conclusion that pathological changes are taking place in the kidneys, and that the individual's life is thereby speedily threatened. In our own experience several cases have occurred which clearly demonstrate the unreliability of the presence of albumin in the urine, as the sole test upon which a conclusion of such vital importance should be based, although neither of those to which allusion will be here made was consequent upon any of the conditions previously spoken of as common causes of albuminuria.

A prominent attorney of this city, for example, has been one of the writer's patrons for over twenty years, and has enjoyed uniformly good health during all of that time; he is now nearly seventy years of age, is unusually robust and active, attends to his professional duties with as much energy as when twenty years younger, reads the smallest print without the aid of spectacles, has gradually increased in weight for the past ten years until he now weighs thirty pounds in excess of his weight at any previous period, and is in every respect in the full stature of mental and physical vigor; yet during the time specified (ten years) albumin could be detected at any and all times in his urine, and in considerable quantities after a severe contest in court; and how much its

presence antedates the period specified there are no means of determining. Here it may not be out of place to observe that the beneficial influence of family history is especially well marked in this case: the gentleman's mother, whom he strongly resembles, being still living, active, and in good health at ninety-six.

Another gentleman, living in a neighboring city, possessed of considerable wealth and actively engaged "in this madly striving age" to rapidly increase his possessions, was induced a few years since to apply for a policy of life insurance, but was promptly declined because of the presence of albumin in his urine. Occasional inquiry since then, however, conclusively proves the morbid product to have been intermittent, occurring only during excessive mental and physical effort, and at no time causing the slightest evidence of impairment of health.

Still another lives in the State of Nevada whose urine has contained albumin at times without any known cause whatever for over twenty years, yet who has at all times enjoyed more than ordinary good health; has gradually increased in avoirdupois during the time specified, and now at fifty-seven presents the appearance of a well preserved and robust man.

Several other equally interesting cases might be cited, were it deemed necessary, all of which tend to illustrate the utter unreliability of the too common prognosis of premature death merely because of the presence of albuminuria.

There is another form of the abnormal condition under consideration which may be termed chronic intermittent albuminuria, which differs essentially from either of those referred to inasmuch as it is invariably confined to youths approaching adolescence, or who may have even reached the years of their majority. This form of the disease was first brought to the attention of the writer a few years ago by Dr. G. L. Simmons of this city, who had observed it in several of his younger patients during the previous year. Whether or not it occurs amongst young girls I am unable to say, although I regard it as being very probable. Those in whom it is found usually appear anæmic, have sunken eyes, and have a woebegone expression of countenance, are listless and disinclined to perform their usual duties, sleep too much, yet are never rested; avoid society, and desire to be let alone. In such cases investigation results in the

detection at one time or other (usually after breakfast) of albumin in the urine. Tonics, sponging with salt water, cheerful society, the adoption of general hygienic treatment, especially the avoidance of anything which would tend to excite the sexual organs, between which and this form of albuminuria there appears to be an interdependence, will generally cause its disappearance within a few months at most.

Cold sea-bathing is also known to cause albuminuria at times, even when there are no evidences of parenchymatous involvement. In such cases, however, there is doubtless some renal engorgement, which, coupled with the high arterial tension consequent upon the efforts put forth in swimming, are sufficient to account for the presence of the abnormal product. Very soon after the cessation of the bathing and the restoration of the equilibrium the urine returns to its normal state. It cannot be doubted, however, that too frequent sea-bathing, especially by persons of strumous diathesis and those of feeble constitution, is hazardous; nor is it doubted that many have thus unwittingly, while in search of health, sown seeds which have ultimately terminated their lives prematurely by inducing what is commonly called Bright's disease.

In all of the forms of albuminuria alluded to there is nothing to warrant the assumption that such persons are ineligible to life insurance, for although no company would accept an applicant suffering from albuminuria in its mildest form until after the most searching inquiry, yet that they are insurable, upon some one of the various forms of term insurance, there can be no doubt whatever. It therefore becomes us to remember that albuminous urine may not infrequently be consequent upon other than well defined pathological changes in the kidneys, and that there are many supplementary sources.

[To be continued.]

A CASE OF LACERATION OF THE LIVER, WITH AUTOPSY.

By J. A. McKee, M. D., Elk Grove, Cal.

George ——, 23 years of age, while in the stable, June 4, 1887, was kicked in the right side by a horse. He walked some twenty feet to the stable door, beckoned to his mother, and, with her assistance, reached the house.

Two hours later I found him in bed with hurried and painful breathing, and complaining of pain in the right chest and side, but more especially in the right shoulder. On examination, prints of the horse's hoof were plainly visible on the arm in its lower and middle third, and on the side between the fifth and ninth or tenth ribs. In the neighborhood of these points there was slight ecchymosis. Examination for fracture of arm and ribs was negative. I applied a bandage to the chest with relief to the patient. While sitting up for the application of the bandage patient vomited. During the following night and day he slept little, and his condition seemed unchanged. On the sixth there was some tympanites and pain. The latter was most severe just above the pubis. The urine was high colored; pulse 80; temperature 99.4° F. Prescribed opiates to relieve pain.

June 7: Breathing easier; jaundice; bile in the urine, which is very high colored. June 8: Occasional vomiting; pulse 80; temperature 99.5° F. June 9: Rests very well and seems better; says he is hungry. June 10: Temperature 100° F.; pulse 100; breathing more difficult; great restlessness; jaundice more pronounced; high colored urine; ashy stools. June 11: Apprehending an unfavorable result, I suggested consultation, and at 5 P. M. saw the patient with Dr. W. A. Briggs. Patient has not slept, is extremely restless and anxious, is very tympanitic and tender over the whole abdomen; pulse 130; temperature 102° F. Prescribed aromatic carbon bisulphide water with stimulants and morphia *pro re nata*. June 12: In consultation with Dr. G. A. White. All symptoms are aggravated; pulse 140; temperature 103° F.; great anxiety. Patient sank during the day, and died at 9 P. M.

Autopsy.—On completing my incision through the abdominal walls, a dark viscid fluid welled up in large quantity and stained everything with which it came in contact a deep yellow. Nearly six quarts of this fluid were removed from the abdominal cavity; there were no adhesions; the entire peritoneum was stained a deep brown; the intestines were filled with gas; gall bladder empty; a laceration one-half inch in depth and five and one-half inches in length extended diagonally across the upper and anterior surface of the right lobe of the liver. To the right of this laceration the liver substance was broken down and filled with coagula.

DEPARTMENTS.

OBSTETRICS, DISEASES OF WOMEN AND OF CHILDREN.

By Wallace A. Briggs, M. D.,

Antiseptic Midwifery.—The most important points may be summarized as follows: 1. Great care in the disinfection of hands and clothing. 2. A preliminary vaginal douche (sublimate) when possible. 3. Careful management of the third stage of labor, and securing firm contraction of the uterus. 4. The dry method of dressing (sublimated jute). 5. If there is rise of temperature, or offensive discharge, a vaginal douche (antiseptic); if this fails, a uterine douche; if this fails, immediate curetting of the uterine cavity. 6. If, later on, there is evidence of peritonitis and the presence of pus in the peritoneal cavity, abdominal section with thorough cleansing and draining offers the best chance.—*Canada Med. Record—Coll. and Clin. Record*, June, 1887.

Treatment of Retained Placenta in Abortion.—In a recent lecture delivered at the Academy of Medicine Budin considers the treatment in cases of abortion in which the membranes have been retained; the dangers of such retention are hæmorrhage and septicæmia. The ordinarily accepted treatment by immediate removal either by the finger or by the curette he criticises unfavorably, and then proceeds to discuss: 1. Is retention of the placenta a source of frequent accident? 2. Are the digital and instrumental procedures for the removal of the placenta quite inoffensive? In 210 cases at the Charité and Maternité, the placenta was retained in 46 cases—22 per cent. When the abortion was complete the mortality was almost *nil.* In the incomplete cases the results were good; one patient died of septicæmia. Budin quotes several cases of death or of cellulitis, peritonitis and endometritis following active removal of the placenta either manually or by the curette. He recommends, therefore, the vaginal antiseptic plug against serious hæmorrhage, and vaginal or, if necessary, uterine antiseptic douches when septic symptoms arise. The antiseptics recommended are corrosive sublimate 1:2000 or 1:3000, and carbolic acid 2:100 or 3:100.

In a foot-note Dr. Hart takes exception to the treatment advocated by Budin, and says: In many cases of retained placenta after abortion I have always removed the retained portions at once, and douched the uterus with an antiseptic. Where the cervical canal has not been sufficiently dilated, I have used Hegar's dilator to complete this. The retained portions can thus be removed as follows: The patient is chloroformed and placed in the dorsal posture. The right hand is then passed into the vagina and the index finger into the uterus, which is grasped by the left hand, so as to steady and fix it. The finger can now easily separate bulky remains, and

shreds can be curetted out. I have never had any result but perfect recovery, with no inflammatory sequelæ.—*Am. Jour. of the Med. Sciences*, July, 1887.

Ulceration of the Female Urethra.—Dr. Landau describes five cases of indolent crater-form urethral ulcer, with deep red, purulent, infiltrated base. Although the women were all syphilitic, the most thorough antisyphilitic treatment was absolutely without influence on the disease, as were caustics also. Of all remedies, lactic acid seemed to exert the most favorable influence. The ulcer begins at the external orifice of the urethra, and, in spite of medication, extends deeper and deeper. Guided by clinical appearances the author named the disease "ulcus rodens urethræ." Its distinguishing characteristics are (1) slow and painless progress; (2) limitation to the urethral tissues; (3) absence of tendency to cicatrize. The prognosis is unfavorable.—*Arch. f. Gynaekol.*, xxx, 1, 1887.

The Frequency and the Operative Treatment of Malignant Ovarian Tumors.—Of 116 ovariotomies performed by Prof. Leopold, 26 (22.4 per cent.) were for malignant growths. Of these, 5 were papillary cystomata (2 double), 11 carcinomatous cystomata (5 double), and 4 solid sarcomata (2 double). In 6 cases (5 of carcinoma and 1 of sarcoma) the neoplasm had already invaded neighboring organs, and hence the operation was not completed. Of these 26 cases of malignant tumor, 5 (19 per cent.) died of asthenia developing rapidly in consequence of the operation, and within the next month died 4 of the 5 on whom exploratory incisions had been made. Thus, including the remaining case of exploratory incision, there survived 16 cases, of which 3 came under observation within the last year. Only 13 then can be considered in regard to relapse; of these, 9 relapsed within the first year; 4 (3 of papillary cystoma, 1 of sarcoma) are as yet to be regarded as cured. As diagnostic of malignant tumors are (1) their appearance at an early age; (2) their rapid growth in connection with sanguinolent ascites, rapidly progressive debility and infiltration of the glands of the pelvis; (3) early and oftentimes complete amenorrhœa. As an aphorism of treatment, Prof. Leopold advances this: Every enlarging ovarian growth, especially when bilateral, should be removed at the earliest possible moment. He discards puncture (tapping) on account of the danger of disseminating tumor germs.—*Deutsche med. Wochenschr.*, *Schmidt's Jahrbuecher*, Bd. 214, No. 5.

Solid Tumor of the Left Ovary.—Dr. Bantock exhibited to the British Gynæcological Society a solid ovarian tumor that he had removed from a married woman, aged 39. On admission the patient's breathing was so much oppressed by ascites that he was obliged to tap her at once, drawing off twenty-two pints of fluid. There was also œdema of the lower extremities, which disappeared in two days. Reaccumulation of the ascitic effusion was so rapid,

however, that on the seventh day the patient was found nearly as large as before. At the operation the peritoneum was found very much injected, and the slightest sponging caused sanguineous oozing. Dr. Bantock therefore washed out the peritoneal cavity very freely, and, to avoid leaving any air behind, left at least a pint of water in Douglas' pouch to be removed by the drainage tube. Dr. Hills expressed the opinion that a great end had been attained in cleansing the peritoneum without the use of sponges.—*British Med. Journal*, May 28, 1887.

ETIOLOGY AND TREATMENT OF THE MULTIPLE ABSCESS OF NURSLINGS.—In nine cases of this disease ESCHERICH has invariably found the staphylococcus pyogenes albus—in four cases in company with the s. p. aureus. The staphylococci were extremely numerous in the purulent contents of the abscesses—always between and never within the cell-bodies. They were abundant also in the wall of the abscesses, whither they had migrated by the sebaceous glands and hair follicles. Multiple abscess in nurslings is therefore the analogue of farunculosis in the adult. The mode of infection is explained by the discovery of these cocci in the passages both of well and of diseased infants. With this view of the disease, prophylaxis and treatment are simple. For the former the utmost cleanliness, and for the latter early opening of the individual abscesses with strict antisepsis.—*Munch. med. Wochenschr.*, xxxiii. 51, 1886.

THE NATURE AND TREATMENT OF CHOLERA INFANTUM.—Of 591 fatal cases of summer diarrhœa reported by Hope in children under two years of age, only 28 had the mother's milk exclusively, and of 341 reported by Ballard, only 2 per cent. had no other food. The evil influences of summer heat are therefore chiefly exerted on the food of the child. A temperature of about 98° F. with exclusion or limited supply of air is extremely favorable to the growth of germs, and the consequent fermentation and putrefaction of milk with the development of an irritant poison, diazobenzol, which was first isolated by the author, PROF. VAUGHAN, and subsequently by several other chemists. This, however, is only one of a large class of bodies produced by putrefaction, many of which are cathartic in action. With bottle-fed infants preventive measures appertain chiefly to the food—especially to milk.

Prophylaxis.—The cows should be healthy and have healthful food and drink—no swill, no refuse either of breweries or of glucose factories, no fermented food of any kind, no noxious weeds, no impure or stagnant water. The barn and yard must be kept clean, and the udders washed before milking. The milk should be thoroughly cooled at once—reduced to 60° F. within an hour, and kept at that temperature. It should be kept in a perfectly clean place free from dust—away from drains, cesspools and other sources of contamination. It should be kept in vessels of either tin, glass or

porcelain, which, after use, should be cleansed, scalded and exposed to the air. The depressing effects of extreme heat on the nervous system, and the consequent enfeeblement of digestion must be borne in mind; thirst must not be mistaken for hunger, and the stomach overloaded.

Treatment.—The food should consist of chicken or mutton broth, beef juice and rice, or barley water. Medicinally, the first thing is to cleanse the alimentary tract. At the outset nothing is better for our purpose than castor oil, but, if the discharges have already become serous, copious enemata of warm water are more suitable. These enemata may contain either an astringent or a disinfectant or both—benzoate or salicylate of sodium for the latter, and nitrate of silver or tannic acid for the former. Next, we should arrest the growth of the germ on which the disease depends. As this germ has thus far been found to develop in acid media only it is proper to administer an antacid. For this purpose the old chalk mixture, prepared with glycerine instead of syrup, can hardly be improved. As to the use of germicides proper much is yet to be learned. The chief value of subnitrate of bismuth in this disease may be due to its germicidal property. Holt makes an excellent showing for sodium salicylate, which he prescribes in from one to three grain doses every two hours.—*Med. News,* June 18, 1887.

SURGERY AND PATHOLOGY.

By T. W. Huntington, M. D., Surgeon, Southern Pacific Company's Hospital.

The Management of Empyæma.—At the meeting of the New York Academy of Medicine, May 19, 1887, the following views were expressed by various writers:

Dr. J. Emmet Holt.—More than one-half of all the cases of empyæma occurred in subjects under ten years of age. The prognosis in such cases is much better than in adults. Spontaneous absorption, though possible, is extremely rare. Dr. Holt has been able to find but two such results where the correctness of diagnosis had been verified by exploration with the hypodermic needle. Hence the chances of recovery through nature's unaided efforts are very small. The indications for treatment consist in evacuation of the fluid contents of the pleural cavity by aspiration or free incision. The advantages claimed for the former method are as follows: 1. Simplicity; 2. Freedom from danger; 3. That it does not remove the fluid rapidly; 4. That it does not require general anæsthesia; 5. That it does not require that the patient should be confined in bed; 6. That many cases are cured by aspiration alone. The objections to aspiration are as follows: 1. The entire quantity of fluid cannot be removed; 2. The terror often excited in children, especially when aspiration has to be repeated, is a serious obstacle to its success; 3. Where septa exists in the pleural cavity, but one division of the

latter may be evacuated. Of 121 cases of aspiration collected by him, 19 per cent. were cured; 6 cases died, and the remainder (92 cases) were subjected to other methods of treatment. Accordingly, aspiration is not to be depended upon as a means of cure. The advantages of incision are: first, its universal applicability; secondly, the fact that it enables the operator to explore the cavity thoroughly. The experience of older operators, notably that of Sir Astley Cooper, led them to regard the procedure as one almost necessarily fatal; but, since the introduction of antiseptics, there has been noted in this, as in other departments of surgery, almost absolute immunity from former dangers. Of 63 cases operated upon under strict antiseptic precautions, there were but two deaths. The average duration of these cases without antiseptics was six months; with antiseptics, six weeks. As a rule we have no better guide than Wagner's words: "Early incision, perfect drainage and complete antisepsis."

Dr. F. Huber, in a paper upon "Acute Empyæma in Children," said: As to matter of treatment, no medicinal agent would have any effect in producing absorption. Symptomatic, palliative and hygienic measures are of some value. The more promptly resort is had to surgical interference the better, provided it is not during the first few days of the attack. After acute febrile symptoms have subsided, aspiration may be tried first. If the pus is found to be "laudable" and inodorous, and reaccumulation is delayed, aspiration may be repeated. As a rule, however, more radical measures are demanded. The incision should be from an inch to an inch and a half in length, a drainage tube should be inserted and the cavity irrigated with an antiseptic fluid. Local anæsthesia by cocaine is snfficient for this operation. Of thirteen cases, three proved fatal from exhaustion, gastro-intestinal catarrh and erysipelas, respectively. All but two of the remaining cases made perfect recoveries, the average duration of the trouble being seven weeks. Mercuric bichloride solution (1–5000) was recommended as an irrigation fluid.

The surgical treatment of empyæma was further discussed by Dr. Robert Abbe. In the treatment of empyæma the idea of securing absorption must be abandoned. The first point should be how to promptly rid the patient's chest of accumulated fluid. Repeated aspirations in a certain number of simple cases is competent to secure recovery. As a rule, this method is more efficacious in children than in adults. If the trouble continue for any length of time after aspiration, complete evacuation should be practised. By far the best results follow free incision and drainage. The seventh or eighth intercostal space is, as a rule, the best point for incision. Two large drainage tubes, of the thickness of the little finger, are usually advisable. Dr. Abbe operates under the carbolized spray, and dresses the wound with sublimate gauze and iodoform. In the great majority of cases there is no need of irrigation, but if the cavity or its contents exhibit evi-

dences of septic infection, this measure cannot safely be omitted. He employs chloroform as an anæsthetic for children, and local anæsthesia by cocaine for adults. In case a large accumulation of infected fibrine be discovered within the cyst wall, resection of a portion of rib and thorough irrigation become necessary.—*Boston Medical and Surgical Journal*, July 7, 1887.

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By Wm. Ellery Briggs, M. D.

Visual Trouble of Dyspeptic Origin.—At the fifth meeting of the French Ophthalmological Society, M. Grand Clement discussed ("Revue Clinique d'Oculistique") the dependence of visual trouble on gastric derangement. Chronic and grave dyspeptic troubles produce, among other neurasthenic phenomena, visual disturbances which cause much distress to patients who do not know the relation between the stomach and visual disorders. It is true that this relationship is still imperfectly understood. The symptoms consist usually in painfulness of the globe, after some moments' use of accommodation, and radiation of pain into frontal region and even to the scalp; at the same time there may be vertigo and a sort of intellectual paralysis, etc. At other times there are scotomata, hemiopia, difficulty in accommodating for near objects, photopsia and, rarely, polyopia. Among children at the age of puberty one may find mild conjunctivitis, iritis, etc. These functional visual troubles are relieved and cured as readily as other neuropathic conditions due to dyspeptic disorders by re-establishing the regularity of the digestive functions. Regulation of alimentation, selection of proper food taken in moderate quantities and well masticated, some saline laxative, and especially alkalies will cause the morbid phenomena to disappear. It is true that if the hygienic rules be forgotten, and the improved bill of fare discarded, the symptoms may reappear. In grave cases, washing out of the stomach and the use of the hypogastric support according to the system of M. Glenard (of Lyons) are very useful. Since the researches of M. Bouchard, one readily explains these apparitions of visual organs of dyspeptic origin; they are simply the phenomena of auto-intoxication. Imperfectly digested food in the digestive tract is transformed into poisonous ptomaines or alkaloids, become absorbed, are carried to a distance to cause a thousand forms of neurasthenic disturbance; vertigo, temporary paralysis of intellect, palpitation, etc. In the discussion M. Buch .on said he thought that dyspeptic troubles, such as had been described by M. Grand Clement, were of rheumatic origin. M. Clement said he was in entire accord with M. Bouchard in believing them to be due to the influence of ptomaines.

WASHING OUT THE ANTERIOR CHAMBER.—M. VACHER says: Irrigation of the anterior chamber is of recent date. I was one of the first, not to say the first, to employ it methodically after each cataract operation ("Gazette Hebdomadaire," Sept. 4th, 1885). I then used for that purpose an antiseptic solution of the double iodide of mercury and potash, and a small syphon with canulæ of various sizes enabling one to regulate the size and force of the stream. Some months after publication of that article, the Academy of Medicine published a communication from Professor Panas on the same subject. I may therefore be permitted to claim priority in washing out the anterior chamber, and thus driving out small fragments of iris, blood, air bubbles, and bathing the iris in an antiseptic fluid. Consequently, secondary cataracts are much more rare—the elements which produce them being removed—the capsule shrivels up behind the iris and preserves the mobility of its sphincter, and rupture of the zonula is less frequent. The irrigation should be performed with much precaution, employing a stream of solution of moderate and constant force. The best instrument, in my opinion, is a small portable syphon which can be elevated or lowered at pleasure. The solution should be warmed to 25° or 30° C. After the irrigation the cornea is the seat of trouble, which rarely lasts more than five or six days. I do not know whether it is caused by the washing or by the constituents of the fluid employed. Fearing that the antiseptic fluid, which is slightly irritating, might be the cause of the trouble, I have used only warm water during the past six months, which I have boiled at the time of operating. The results which I have obtained are very favorable. I think that irrigation of the anterior chamber will become a necessary accompaniment of each cataract operation, and that it will prevent suppuration of the cornea, iritis and secondary cataracts.—*Ibid.*

ARTIFICIAL MATURATION OF CATARACTS.—M. ROHMER arrived at the following conclusions from his experience: It is possible to produce artificial ripening of cataract by the following methods: (*a*) incising the anterior part of lens with a needle; (*b*) paracentesis of anterior chamber with entire evacuation of aqueous humor; (*c*) massage made for some instants against the upper lids. In from twenty-four to thirty-six hours the opacity is nearly total, and is quite so in three or four days. Extraction can now be performed, but more would be gained by waiting a few days longer. The accidents resulting from such maturation are almost *nil;* the danger to the consecutive extraction consists in the incomplete evacuation of the lens substance. This may be avoided by washing out the anterior chamber; failing to do this one may see a plastic irido-choroiditis produced with occlusion of the pupil. Artificial maturation may be employed in cases in which spontaneous hardening goes on extremely slowly, and when both eyes are cataractous, and when spontaneous opacification is far from being sufficient to permit of extraction, but when

the vision has already so very considerably diminished as not to permit the patient to travel around by himself or to follow his occupation.—*Ibid.*

POSITION OF THE HEAD IN WRITING.—PAUL SCHUBERT, in "von Graefe's Archiv.," xxxii, 1, p. 33, advocates the introduction of perpendicular handwriting into schools in place of the current slanting hand The article occupies 82 pages, and has annexed four tables of the results of various measurements of the position of the head, etc., and seventeen specimens of German handwriting, every century from the eighth to the eighteenth, inclusive, being represented. As a practical conclusion to be drawn from his observations, Schubert lays down the rule that all children should be taught a perpendicular handwriting. Even if the erect median position of copy book be not actually better than the oblique median, still the teacher cannot tell, when inspecting work done at home, what absurd position may have been adopted in writing it, if the child is permitted to write anything but perpendicular letters. These letters can only be executed in the erect median position. It may be possible for adults to write more rapidly a slanting than a perpendicular hand, but in a manner that does not tend to deform their vertebral columns or their eyes. In many countries, now-a-days and in the past, perpendicular handwriting alone obtains and in Schubert's facsimiles of German handwriting it is seen that slanting letters were not adopted to any extent until the 17th century.—*Ophthalmic Review*, May, 1887.

TRANSPLANTATION OF THE CORNEA.—ADAMUK regards the preservation of the neighboring portion of the sclera as the most important step in this operation, and he advises excising as much as two millimetres in width of the latter in connection with the cornea, in order to retain as many of the nutrient vessels as possible. In his experiments he first employed the cornea of rats. The animal was killed, and, after carefully washing out the eye and *cul-de-sac*, the conjunctiva was dissected up from the equator, the sutures were inserted, and the whole was reflected over upon the cornea. The cornea and neighboring sclera were then separated from the eyeball and spread out in a one per cent. solution of common salt. Here it remained while the eye of the patient was prepared for transplantation. The cases chosen for this operation were those in which the entire cornea had been transformed into a dense leucoma. Before the trephine was used, the conjunctiva was dissected up all around for a breadth of two or three millimetres, and the necessary sutures were introduced. The trephine was then applied, and a piece of opaque cornea removed. The rat's cornea was then immediately applied in such a manner that the sutures were placed opposite each other, and they were immediately tied. A bandage was now applied, and this was not changed till the third day. Three cases were thus treated, but

in all of them the transplanted cornea sloughed. Adamuk then determined to resort to fowls' eyes. The operation was performed in the same manner, except that the ossification of the sclera in the vicinity of the cornea in the fowls' eyes required the removal of a larger width of sclera than was really necessary. Out of five cases operated upon in this manner, three proved successful. In two or three weeks after the operation the disintegration and rejection of particles of ossified sclera were observed as an independent process. The transparency of the transplanted cornea remained intact in all three cases—*Klin. Mntsbl. f. Augenheilk.—N. Y. Med. Jour.*, July 9, 1887.

THERAPEUTICS, DERMATOLOGY AND VENEREAL DISEASES.

By Crocker Simmons, M. D.

Kremyanski's Analine Treatment of Phthisis.—The "Medical Record" (May 14, 1887) refers editorially to the analine treatment of consumption, and records the resolution of condemnation of this method of treatment by the Moscow Medical Society. The action of this society was based on the result of a single case, in which this analine treatment apparently hastened the patient's end. The "Record" rightly says: "It is hardly fair to condemn in such strong terms because of a single failure, which may not have been justly chargeable to the treatment adopted."

Method of Prophylaxis in Scarlet Fever.—The "British Medical Journal," June 11th, 1887, under this title, publishes a very instructive paper by Drs. W. Allan Jamieson and Alexander Edgington. The clinical view is presented by Dr. Jamieson, and his deductions are confirmed by the microscopic researches of Dr. Edgington. The two sources of infection are supposably exhalations from the mouth and throat in the early stage, and the particles of dry cuticle, cast off in the latter stage; on this the method of prophylaxis is based. It consists in isolation as early as possible. Then the throat is disinfected by painting with a strong solution of boracic acid in glycerine (a saturated solution of boroglyceride in glycerine). But the most important step yet remains The scaling cuticle is sought to be rendered harmless by means of inunctions, twice daily, of the following ointment:

Acidi carbolici,	xxx grs.
Thymol,	x grs.
Vaseline,	1 dr.
Ung. simplicis,	1 oz.

A warm bath is given at night. A series of cases in which this plan of treatment was fully carried out are recorded, and the results certainly demonstrate its prophylactic value.

TREATMENT OF HAY FEVER.—SIR ANDREW CLARKE selected as the subject of his "Cavendish Lecture," a "Speedy and sometimes Successful Method of Treating Hay Fever." The author states: "If you will compare the results of this treatment with the results of every other treatment, not excepting the cocaine treatment, which is its closest rival, you will have to confess that, however small may be the measure of success, it is not one which you can afford to despise." According to his views, three factors are at work in the etiology of this disease—the nervous constitution, the local irritability and the external exciting cause. He admits the value of a change to that climate where the external exciting cause is not present—as in high altitudes or on the ocean. But the physician must often deal with cases where the patient is compelled to remain within the limits of an exciting cause. To such Dr. Andrew has addressed his investigations. The local treatment seems to be the chief mode of relieving or curing the disease, and of such we have three plans—first, to allay the irritability of the mucous membrane; second, to exhaust the irritability; and, third, to remove or to destroy by caustic or cautery those portions of the nasal mucous membrane found to be the seat of the pathogenic irritability.

As to the first plan, the author did not find favorable results from any remedy except aconitine and atropine, and these of such slight value as to be of no material advantage. The after-effects from these drugs were at times very disagreeable. The comparatively recent introduction of cocaine gave a new stimulus to his researches to allay the nervous irritability, but his successes with a larger experience have not been what they promised to be, and he has felt that this plan of treatment is overrated, though of sufficient benefit to justify further trials. His main reliance in the treatment of hay fever seems to be included under the second plan, aided also by general measures. In his own words, "the object of the plan is to subdue the local irritability of the nasal mucous membrane to such an extent that it shall no longer react to special or common irritants whether pollen or dust, in a pathogenic manner." The general treatment embraces a "simple but liberal" diet, extreme moderation in the use of alcohol, daily exercise, early hours, and, as medicaments, arsenic and iron, and if nervous as well as weak, in full doses tartarized iron, ammonium bromide, tincture of nux vomica and solution of the arsenite of soda. Fifteen grains daily of quinine dissolved in citric acid and given in effervescence with ammonium carbonate have also yielded good results. The local treatment which the author thinks is very important, is as follows: Glycerine of carbolic acid, 1 oz.; hydrochlorate of quinine, 1 dr.; and a two thousandth part of perchloride of mercury. Heated glycerine of carbolic acid will dissolve the amount of quinine. For a cleansing solution, boroglyceride one ounce to the pint of warm water is recommended. The mixture is then applied by means of a laryngeal

brush. The after-effects are unpleasant and he warns the operator to advise the patient of what will follow. Sometimes there is a slight frontal headache, at times a blood-stained mucus is discharged from the nose, and again a slight cough and even a paroxysm of the hay fever. Within half a day these unpleasant consequences subside. As to the results, the writer states, that sometimes a single application is sufficient to prevent for the whole season a return of the paroxysm, and four times within his knowledge it has never reappeared. Two or three applications are usually required, and the interval between ranges from two to three days, according to the severity of the after-effects.—*British Medical Journal*, June 11, '87.

THALLIN IN THE TREATMENT OF GONORRHŒA.—On the basis of Dr. Kreiss' experiments on gonococci with this drug, PROF. GOLLY, of Zurich ("British Medical Journal") has treated several cases of acute and chronic gonorrhœa with Thallin. Solutions of two to two and one half per cent. injected in the inflammatory stage have quickly changed the discharge from purulent to sero-mucous. Such complications as epididymitis, irritation of the bladder, and cystitis are in a certain degree prevented. Cases of gleet seemed permanently benefitted by irrigations of the urethra with a one to one and one-half per cent. solution. The internal administration of the drug in doses per day of 25 to 30 centigrammes is also of advantage in cases of sub-acute or chronic cystitis of gonorrhœal origin.—*Therapeutic Gazette*, June 9, 1887.

SOCIETY PROCEEDINGS.

Sacramento Society for Medical Improvement

Regular Meeting, Tuesday, May 21, 1887.

The President, W. E. BRIGGS, M. D., in the Chair.

DR. W. R. CLUNESS exhibited a specimen from a case of *Fibro-cystic Tumor of the Uterus, with a Life History of over Thirty Years.*

The pathological specimen which I here exhibit consists of the uterus and all of its appendages embraced in what has been regarded by me, for the past twenty-four years, as a mass of extra-uterine fibroid growths. Were Dr. Oatman present he could probably give us the earlier history of the case, as I have been informed by the husband and daughter of the lady, from whom the tumor was removed, that he had previously attended her professionally. At any rate I was summoned to attend her twenty-four years ago this month, and, upon examination, diagnosed the existence of two distinct extra-uterine tumors, so intimately connected with the uterus posteriorly and superiorly as to render their removal extremely hazardous.

The lady was then forty years of age, menstruated regularly and normally, was unusually active and industrious, and enjoyed excellent health, my services having been solicited for diagnostic purposes only. Upon further inquiry I learned that she had had three children at so many births, the last being then fourteen years of age. Her labors had been in all respects normal, yet she had ever since experienced at intervals, more or less uneasiness, and, at times, considerable pain in the uterine region. About four years subsequent to the birth of her last child she felt confident there was "something growing in her womb," and about six years later she accidentally discovered a small and hard tumor above the brim of the pelvis to the left of the median line. A few months later, while in the recumbent position, she discovered that the growth referred to, communicated with two others which were more deeply situated, and for the first time she consulted a physician. From this time until she fell into my hands, just twenty-four years ago, I have been unable to ascertain anything more definite than that the tumor was regarded as being a multiple fibroid, and that it could probably be successfully extirpated. At any rate, the late Dr. J. F. Morse, who was her then attendant, and who fully concurred in the views already expressed, advised its removal. The doctor, however, having removed to San Francisco the case came fully under my care. During October, 1863, it was observed that not only had the growths alluded to slightly increased in dimensions, but a tumor similar in all respects, could be distinctly felt to the right of the median line and intimately connected with the uterus.

Examination with the uterine sound demonstrated the correctness of the previous opinions as to the character and location of all the morbid growths and their close attachment to the uterus, and it was not deemed proper that any attempt should be made to remove them for the following reasons:

1st.—Because they were considered to be fibroid and too intimately connected with the uterus to admit of their removal independent of that organ.

2d.—Because they did not materially interfere with the comfort of the patient, or prevent her from attending to her usual household duties.

3d.—Because their removal would have been attended with extreme danger to her life.

4th.—Because of the probable near approach of the menopause, when it was hoped their further development would be arrested, or their absorption take place with the assistance of appropriate treatment.

During the subsequent ten years, however, she continued to menstruate with regularity, and it was not until 1875 that the catamenia had entirely ceased. The tumors, also, slowly increased in dimensions, and by this time had assumed the appearance and imparted

the sensation of one large nodulated mass. They also maintained the characteristic hardness of fibroid. Nowhere could there be discovered evidence of cystic degeneration, nor had there been at any time sufficient discomfort to demand the services of a physician, my visits having been usually made for the purpose of watching the progress of the case, or for some other trifling ailment wholly disconnected with the question under consideration.

In 1872, the approach of the menopause became evident by irregularity in the return of the flow, and by its diminished quantity, yet it was not until the early part of 1875 that she could have been said to have fully completed that period. She was then, it will be observed, 51 years of age. It should, perhaps, be mentioned here that during the year 1873 she removed with her husband to the country, eight or nine miles east of this city, where for ten years she not only superintended her household duties with great ability, but also canned and preserved large quantities of fruit, for which she invariably received first premiums at our State Fairs. She also prepared for publication her very admirable work upon cookery. These facts attest her great industry and usefulness. She enjoyed uniform good health, making an occasional visit to my office for the purpose of noting any important changes which might have occurred. It was thus observed that the tumor slowly but surely increased, for by 1882 it had reached to within a couple of inches of the umbilicus. It was also observed that the tumors, heretofore distinct and separate, excepting in their basic attachment, had considerably coalesced, and that cystic degeneration was taking place in the most prominent point to the right of the median line.

In 1883 she again took up her residence in this city, not, however, because of failing health, but for the purpose of obtaining that rest and freedom from the drudgery incident to farm life to which she believed herself entitled during the remainder of her life. Her health continued uniformly good; at no time during all of these years had she suffered any considerable amount of pain, nor had she at any time required an anodyne of any kind. Early in 1885 a slow but progressive emaciation took place in her general system which caused the tumor to appear larger and more prominent; it had not increased, however, nor do I believe there was any subsequent development. She complained of more than usual discomfort in the tumor, which, she stated, was becoming burdensome. By the early part of the present year she had become much emaciated, the cyst wall appeared thinner, especially over its left half, and in February subacute inflammation over nearly the whole of its surface had commenced, necessitating for the first time the administration of opiates. From this time she very gradually failed until the 5th of June, when she died of asthenia.

Autopsy.—With the assistance of Drs. Simmons and Baldwin, a

post-mortem examination was made, and I am therefore enabled to present this very interesting pathological specimen. It should, however, be stated that it was firmly attached to the uterus, and from the history of the case, and the evidence presented during the necropsy the conviction was clear to each of us that it never could have been removed during life independent of that organ.

The whole mass is somewhat irregular in outline and is pear-shaped, the larger end pointing upwards, and weighs slightly less than thirteen pounds. Upon its anterior surface, you observe, the uterus into which this probe readily enters a distance of three inches; you also observe that there is no line of demarcation between it and the tumor, and that both are so inseparable as to present the appearance of but a narrow sinus in the anterior aspect of the growth into which the probe enters. All of the uterine appendages are wholly obliterated. Upon making a section of the uterus from os to fundus you observe that its texture appears healthy and normal, and you see now more clearly than ever that its posterior wall forms part of the anterior wall of the tumor. Upon making a section of the tumor, slightly to the right of the median line, we enter a large cyst containing a thick, smeary mass, resembling vernix-caseosa, consisting of epithelial cells and sebaceous fluid, or what Klobe terms fatty grease, like lard or butter. As we evacuate this semi-fluid, ropy material we find hairs intermingled therewith, and as we approach the inner walls of the cyst we find a large mass of dark brown hair from three to six inches in length, attached thereto. This is in the right segment of the cyst, and is attached to a large plate of bone. Here, also, are several smaller plates of bone situated in different parts of the inner surface of the cyst; and firmly imbedded in its posterior aspect, is a large osseous development somewhat resembling the inferior maxilla, into which are inserted two well developed incisors. This, gentlemen, is a revelation, and demonstrates the existence of a dermoid cyst.

In the cyst-wall, more particularly upon its posterior aspect, and to the left of the median line are several small cysts, which upon being evacuated, you perceive contain a semi-gelatinous substance somewhat less creamy in appearance and less greasy. These, I believe, are fibrocystic growths, from which it still appears probable my patient suffered originally, the right ovary becoming subsequently involved, and developing the dermoid cyst which you have been examining. I will make a more careful dissection of this most interesting specimen and report upon the subject.

A further examination of this very interesting pathological specimen enables me to confirm the views previously expressed regarding it. There can be no doubt that the specimen is exceedingly rare and valuable, presenting as it does unmistakable evidence of the existence in one morbid mass of a degenerated fibroid growth and a dermoid ovarian cyst. I have discovered in connection with the

dermoid part of the tumor nothing of special interest, excepting that the hair was firmly attached in part to the dermoid surface, and that its attachment resembled very closely that of the hairy scalp, springing from hair follicles. It was also of a dark brownish color, and closely resembled the natural hair of the patient, which is said to be a very unusual thing, the hair of dermoid cysts being usually reddish blonde.

Regarding the origin of dermoid cysts I need say but little; any of the text-books upon ovarian tumors contain the desired information. The old idea, however, that they are the remains of fœtuses, does not obtain credence anywhere, for Schnabel found one in a girl thirteen years of age who had never menstruated, and which contained several fragments of bone and over 100 teeth. Dermoid cysts have also been found in fœtuses of eight months, at full term, and at all subsequent ages. Peaslie considers them always congenital.

This case presents many points of great interest, and to me it is of very great value, especially as it demonstrates fully the correctness of my opinion in advising against surgical interference. Here was a lady who had lived a far more than ordinary and useful life for upwards of thirty years, and all that time carried in her abdomen a slowly developing tumor, the removal of which would at any period of its existence almost necessarily have terminated her life. I had stated, in reply to a question, that in my opinion the surgeon was never justified in interfering with a morbid growth of any character, unless it endangered the life of his patient. Since then I have read with much interest the corroboration of those views from the pen of Dr. Horatio R. Bigelow, of Washington, D. C. He says, "I hold it as axiomatic that *no tumor calls for surgical interference unless it is immediately endangering life.*" When, however, we encounter a rapidly growing cyst, or malignant growth, or soft myoma, the case is different, for there is no known cure but by early operation. In the case under consideration, I entertain no doubt whatever that an operation at any time would have resulted fatally; and I am equally certain that the judicious surveillance and care exercised in the conduct of the case, coupled and seconded by the extraordinary good judgment of the patient, prolonged her useful life for many years.

Dr. G. G. Tyrrell read a paper on *Zymotic Disease in its Sanitary Relation.* The author reviewed the various theories regarding the propogation of disease and its transference from person to person; its carriage by clothes, air, food, water and the specific nature of the contagion in individual diseases. His views were in accordance with modern pathological research, and agreed with the germ theory in the explanation of the morbid processes attending zymotic diseases generally. Reference was incidentally made to prophylaxis, but the subject of practical preventive measures was not discussed.

Dr. I. E. Oatman, in opening the discussion, said that many of the great desiderata in sanitary matters were yet undetermined. Thomas, according to his definition, classes most of the common diseases as zymotic. Regarding the germ theory, his latest observations showed him that eminent authorities were still undetermined whether a pathological condition of the system first existed furnishing a culture ground for the spores, or whether the germ originally sets up the process. He was inclined to the opinion that the pathological condition first existed. If germs were really the origin of disease, then it would be possible to look forward to the discovery of a germicide for each. Cleanliness, as bathing, efficient sewerage and disinfection, were the first requisites. Diphtheria was one of the diseases which was regarded as of bacillary origin, and the question he had raised applied directly to this, but the probability was most strong that a pathological condition existed beforehand.

Dr. W. A. Briggs, while concurring in the main with the views of the author of the paper, expressed his emphatic dissent from those of Dr. Oatman. It is a well-recognized principle in scientific investigation, other things being equal, to accept the simpler explanation. Why, then, assume the concurrence of an "essential pathological condition," and of bacilli or germs as mere epi-phenomena, when the latter alone suffice for the most severe exactions of the scientific method? But the germ theory is not merely the simpler explanation—it is the only one. That an independent and essential pathological condition should invariably co-exist with an accidental factor, the germ, and never exist at any other time, is not merely improbable—it is absolutely without the pale of possibility.

Dr. J. R. Laine said that the evidence in favor of the germ theory was conjectural and imperfect. We simply take the statements of authorities and observers. What did we gain? For all admitted that filth produces disease. Taking one disease, it seemed most reasonable to suppose that diphtheria has a germ origin. The presence of spores or germs in any disease would not decide that they were the causing element.

Dr. G. L. Simmons—Had on former occasions expressed his faith in the germ theory, and had seen nothing during the last few years to controvert it. The fact that we had not been able to determine all the germs of individual diseases did not refute those that had been demonstrated. We do know that some exist, and that they had been cultivated. The question of remedies was of importance in this connection; most of them would kill the germs outside as well as in the body. The sulphides, the mineral acids, the iron preparations, all were germicides. We get their local as well as their general effect, and we failed, as in diphtheria, when they were not absorbed. There seemed to be some direct relation between privy filth and diphtheria. Two years since he had seen a case in the

western part of this city, where on the opposite side of the street and in the alley behind the house cases also existed. Some days before the children had been watching an excavator at work in the neighborhood, and all were taken sick about the same time. Several cases which had recently occurred in one neighborhood were traceable to the same cause, the children having watched a cesspool being emptied.

Dr. W. R. Cluness said that Dr. Briggs had graphically expressed his views on the germ theory. He could not see how, as Dr. Oatman stated, that a person's system could be in a condition to propagate the disease, unless the specific germ was present. If the infective element was scarlatinal, it would produce its like and that only. He wished that the paper had been more practical. It was a popular notion that whooping-cough, scarlet fever, etc., were a necessary part of the education of early life, and the public mind should be disabused of this error. Medical men should be more cautious in their habits and avoid conveying infection as in scarlet fever and diphtheria. He would like to add a remark by Dr. Angel, of Philadelphia: "No scientist on either side of the Atlantic disbelieves in the germ theory of disease, therefore we should accept it."

Dr. T. W. Huntington disagreed with Dr. Oatman. He was not a bacteriologist; he did not believe that the ordinary practitioner could go into work of that kind. They got their inspiration from elsewhere. He was not aware that any authority would gainsay the position of bacteriologists in the statement of the germ theory. Instead of gainsaying the theory, it was better to carry it out in practice. Regarding the ingress of diphtheria, he believed that the poison was not a local one, though one of the earliest symptoms was in the fauces.

The Physiological Action of Gaseous Enemata.—Dr. Bergeon, in a communication to the Académie des Sciences ("L'Union Médicale") says: Elimination of carbonic acid takes place by the lungs; the pulmonary interchange is active, and it produces what we may term a "veritable ventilation by the carbonic acid." We can compare this interchange to a sort of respiratory diuresis; the carbonic acid appears to play a similar part to that of water in the urine, the CO_2 in traversing the tissues is charged with excretory products which ought to escape from the body, and the gaseous enema clears the veinous blood which it traverses, the lungs, the bronchi and the respiratory passages; it causes a veritable bathing of the blood and the organs of respiration. As nothing is more difficult than washing the impure carbonic acid, we recommend the employment of the purest material for its production, and the use of glass apparatus similar to that which we have adopted where the gas is conducted directly into the intestine. We are convinced that the great part of the remarkable therapeutic failures, accompanied by colic, are owing to the use of defective apparatus or impure gas.

The Sacramento Medical Times.

JAMES H. PARKINSON, L. R. C. S. I., EDITOR.

SACRAMENTO: AUGUST, 1887.

CHANGES IN THE PLAN OF ORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

The report of the committee on changes in the plan of organization and by-laws of the Association is an able document and the question bears evidence of careful consideration at its hands. It is to be regretted, however, that the report is, in the main, adverse to any change, though we recognize with satisfaction the recommendations which imply some desire for progression.

The report advises the formation of a general committee, to be composed of two members from each State and Territorial Medical Society entitled to representation in the Association, and from the medical departments of the United States Army, Navy and Marine Hospital Service. The term of office will hereafter be two years, and the committee will be elected by the members registered and present at the annual meeting from each State, Territory, etc. This committee will nominate the officers for each year and perform other work which may be required of it by the Association. This comprises the important changes recommended; some alterations in the by-laws have also been suggested, all of which are of practical value.

There is no doubt that great difficulties beset an attempt at radical changes in such a body as the National Association, and it would take much time and thoughtful consideration to bring these changes to a successful issue. The fact remains that the American Medical Association does not hold to-day

the position to which it is rightfully entitled. The oft repeated connection between local and State societies is a matter only of theoretical existence. The door has long been open for every member in these societies to join the Association, but few have availed themselves of the privilege; and this condition is likely to continue until the various organizations are harmoniously welded together. The Association's gain in membership is not commensurate with its position, and as this gain means increased revenue and augmented influence through a real constituency, which it alone is entitled to represent, we must, for the present, patiently submit to the insinuation that the Association assumes a status, which facts will not entitle it to claim. It certainly appears that the absence of a permanent organization and the many factors which that implies have tended to the production of numerous special associations whose existence is in a measure harmful to the older body.

THE PROFESSION AND PUBLIC IMPROVEMENTS.

A very large immigration of the better class of people is sure to visit California the coming winter. At all the principal eastern centres parties are being formed to spend from three to six months upon the Pacific Coast, and the progressive cities and towns of our State are vieing with each other in their efforts to make a good and lasting impression upon the coming visitors, who will stay longest in that locality where the comforts and even luxuries of life are best obtained.

Realizing the great advantage to be gained by retaining at least a share of this influx, public attention is now being directed to some of the defects of our water supply, drainage, sewerage and unhealthful surroundings. Discussions are being held as to the best methods to correct these evils, and the knowledge of medical men upon the subjects is sought after with the greatest avidity. Here, then, is an op-

portunity for our profession to make its influence felt in matters relating to the public health. In this field we have no competitors, and a full and free tender of such knowledge at this time will elevate our calling and be appreciated by a generous people.

THE REPORT OF THE BRITISH COMMISSION ON HYDROPHOBIA.

The Commission which was appointed in April, 1886, consisted of Sir James Paget, Sir Joseph Lister, Sir Henry Roscoe, Dr. Richard Quain, Dr. Lauder Brunton, Prof. Burdon Sanderson, and Dr. George Fleming, Principal Veterinary Surgeon to the Army, with Mr. Victor Horsley as Secretary. These familiar names carry with them the assurance that their verdict may be taken as the deliberate expression of acknowledged scientific authority, arrived at by careful inquiry and accurate experiment.

In pursuing the investigation, Professor Burdon Sanderson, Dr. Lauder Brunton and Mr. Victor Horsley visited Paris, inspected the work of M. Pasteur's laboratory, examining his cases, statistics and published opinions. They personally investigated the history of ninety patients who had received treatment after infection from animals supposed to have been rabid. Mr. Victor Horsley also made a series of experiments for the committee.

The report is in every way favorable. In reviewing it, the "British Medical Journal" says: "In a comparatively few paragraphs it affords the most complete and powerful defence of M. Pasteur's method, and the most crushing reply to his critics yet published." We are indebted to our London correspondent for a copy of the report, an abstract of which appears in another column.

NOTES.

San Jose, with a population of 20,000 and 32 physicians, has no Board of Health.

The Crown Prince.—The "British Medical Journal," of June 2, 1887, says that Dr. Mackenzie has again operated on the Prince and removed almost the whole remaining portion of the growth. It is believed that no further operative procedure will at present be required. The interest in the case now centres on the question of recurrence

The Typhoid Bacillus.—M. Gabriel Pouchet, reporting the results of experiments in the cultivation of the typhoid bacillus to the Academy of Medicine ("British Medical Journal"), says: "The proliferation of the bacillus ceases in media of any kind that are rich in organic matter. It is more easily developed in pure than in impure water. The best medium of cultivation appears to be a nutritive gelatine obtained from broth prepared in the same manner as that usually made from veal by means of intestine from which all fæcal matter has been washed away. It is interesting to compare this experimental result with the fact that the anatomical lesions of typhoid are principally situated in the intestine.

Leprosy Communicated Through Vaccination.—Professor W. T. Gairdner relates a case in the "British Medical Journal" in which leprosy was undoubtedly communicated through vaccination. A physician practising on "an island in the tropics, a well-known endemic seat of leprosy," vaccinated his son from a native child in a leprous family. The child subsequently became affected. Using his son as a *vaccinifer* he vaccinated the child of a patient. Both children became affected with leprosy, which in the latter case assumed the gravest form, and at the date of the narrative was approaching a fatal termination. In the child of the physician the disease, though well marked, was of a very mild type, which had not prevented his attending a public school and pursuing the usual educational course.

Public Libraries and Infectious Diseases.—The "British Medical Journal" mentions that Dr. Linsom has recently called attention to the position which public libraries may occupy in the dissemination of infectious diseases. The doctor "recognized at the house of a patient suffering from scarlatina, a book which he recollected having noticed in the room when in attendance upon a previous patient, a few days before, who was also suffering from that disease. On inquiry he ascertained that in the second case the symptoms had commenced within two days of the loan of the book, and circumstances plainly point to the book as the source of infection." The same danger exists in every town which possesses a free library, and while some precautions may be taken by the authorities in the absence of compulsory notification, of infectious disease, the matter will be one of extreme difficulty.

INDEX MEDICUS.—We notice in the "Therapeutic Gazette," of June, 1887, that the Tennessee State Medical Society, at the meeting at Nashville, adopted a resolution expressing its high appreciation of the liberal aid given investigators everywhere by the publisher of the "Index Medicus." and hoping that the profession would not allow "the final effort to maintain a great periodical, which has reflected special credit on American medical science, to fail because of indifferent and niggard support." The resolution is a graceful tribute to the unique publication, whose merits are best described in the following paragraph from the original prospectus: "Few words are required to demonstrate the utility of the projected serial. In its pages the practitioner will find the titles of parallels for his anomalous cases, accounts of new remedies, and the latest methods in therapeutics. The teacher will observe what is being written by the masters of his art in all countries. The author will be enabled to add the latest views and cases to his forthcoming work, or to discover where he has been anticipated by other writers." * * * In the hands of its present publisher, Mr. George S. Davis, the original standard has been fully maintained, and it is rather discouraging that the work does not yet pay for the expense of publication. If medical societies throughout the country would follow the example of the National Association and become subscribers, it might enable the enterprise to be continued without financial loss. We have some pride in the fact that the Sacramento Society for Medical Improvement, possesses a complete file of the "Index."

PROLONGED SURVIVAL AFTER DESTRUCTION OF STOMACH.—A remarkable case of poisoning by chloride of zinc, followed by absolute destruction of the stomach is reported by Mr. W. H. Jalland in the "British Medical Journal." The patient, a man aged 33 years, swallowed with suicidal intent, about three or four ounces of a saturated solution of chloride of zinc, June 12th, 1887. During the two weeks following the ingestion of the poison, he vomited constantly; the vomiting was regurgitant in character and followed every attempt at taking food; there was frequently a tinge of blood in the matter ejected. Under treatment he improved and though the vomiting continued it had lessened, there was no tinge of blood, and the patient was up every day. About July 31st, he began to lose ground, the vomiting became more frequent, and he was fed by nutrient enemata. After this he improved, at first retaining small quantities of milk and beef tea which were gradually increased until he consumed eight pints of strong beef tea and one or two pints of milk daily. Early in September, though taking this large quantity of nourishment, he began to fail, dying on the 7th. During the entire illness he suffered from substernal pain and a burning sensation in the epigastrium both of which were increased by taking food. At the necropsy no trace of the stomach could be found. Its place was filled by an organized inflammatory matting of the gastro-hepatic omentum. and the upper portion of the great omentum to the adja-

cent viscera. The mass showed no traces of the muscular mucous or serous coats of the stomach, but consisted of organized inflammatory peritoneal adhesions. It was about five inches in length and four in circumference. On opening it no trace of a mucous membrane could be seen between the termination of the œsophagus and the commencement of the duodenum, a distance of four inches. The internal diameter of the cavity was from three-quarters to one inch.

SPECIAL CORRESPONDENCE.

NEW YORK.

[FROM OUR OWN CORRESPONDENT]

The Summer Recess.—Medical Service amongst the Tenement House Population.—Work of the St. John's Guild.—Fresh Air for the Sick.

The busy wheels of the various medical societies are now at rest, after a season of great activity, during which no friction has been noticed or discordant jars have been heard. The last meeting of the Academy of Medicine, before the summer vacation, was devoted to reports from the numerous sections, and to a memoir of the late Dr. E. Darwin Hudson, Chairman of the Section on Practice of Medicine, by Dr. Lawrence Johnson; after which the President entertained the Fellows of the Academy and their friends at a reception at his residence.

Among those present at this reception were the members of the newly organized American Orthopædic Association, which had been holding sessions during the two days previous. Prior to the reception, it had enjoyed a dinner given to its members and a few other guests at the beautiful St Nicholas Club-house, on Fifth Avenue, by the committee who had charge of the organization of the association, Drs. V. P. Gibney, L. H. Sayre and H. M. Shaffer. At this delightful banquet short addresses were made by the President-elect, Dr. Shaffer, and by Drs. Lewis A. Sayre, of New York, Bradford, of Boston, and A. S. Roberts, of Philadelphia.

At the last meeting of this season of the New York County Medical Association, valuable papers were read by Dr. George T. Harrison, on Indications for the Induction of Premature Labor, and by Dr. Charles A. Leale, who was for two years president of the Association, on the Prevention of Chronic Disease among the Children of New York City. In the course of his remarks, Dr. Leale incidently gave an interesting account of the valuable work accomplished among the children of the poor during the summer of 1886, by the St. John's Guild, with which he has, for some time past, been prominently identified. For a number of years past it has been the

practice of the New York Board of Health to appoint a special corps of physicians to systematically visit the tenement house population during the heated term; but last year, as the Board of Estimate and Apportionment failed to make any appropriation for defraying the expenses of this work, and none could be spared from the regular funds of the Health Department, it was found necessary to discontinue the service.

In consequence of this the St. John's Guild determined, at its own expense, to make up as far as was in its power for this deficiency, and three members of the Board of Trustees, of whom Dr. Leale was one, having generously given up their summer vacations to devote themselves to the work, were constituted a supervising committee. Dr. Leale was chosen president of the latter, and in order to accomplish the most good, six physicians, among those best fitted to perform the duties, were chosen from a long list of those familiar with the English, French, German, Italian, Spanish and Hebrew languages, so that as many sick children as possible might be benefitted. The most densely populated parts of the city were selected as those requiring the most urgent attention, and they were divided into six districts; to each of which a physician was assigned. The work began on the 3d of August and ended on the 13th of September, and during this time 3659 families were visited; representing 7146 adults, and 10,086 children. Among these there were found 217 sick adults, and 3376 sick children. The diseases most prevalent were gastro-intestinal trouble, measles, diphtheria, scarlet fever, scrofula and syphilis, and in nearly every case these 3376 children were not only without proper medical care, but were living in places of such unhealthy character as to render complete recovery almost impossible.

The vast importance of improving the sanitary conditions being, therefore, duly recognized, this corps of visiting physicians were directed to make special investigations in regard to the sanitary condition of the houses, and, as a result, they reported that 699 premises were in good sanitary condition and 2097 were in a fair condition, while 863 families were surrounded by bad hygienic influences or living in places unfit for human habitation. These were immediately reported to the Board of Health for correction. To give the sick children the benefit of as much fresh air as possible, 6312 free tickets were distributed for the excursions of the St. John's Guild Floating Hospital, which, three times a week during the hot weather, carries out to the ocean over a thousand mothers and children, to both of whom an abundance of wholesome food is supplied. In addition, to twenty-four very ill children, tickets were given admitting them and their guardians for a fortnight at the Guild's branch hospital which is beautifully situated on Staten Island, with an ocean beach on one side and a fine grove of shade trees on the other.

During the entire service the visiting physicians devoted on an average four hours a day to their work, and some of their reports re-

vealed a sickening condition of affairs in some of the over-crowded tenement districts. One of them, whose district was inhabited principally by Hebrews recently arrived from Austria, Hungary, Poland and Roumania, wrote: "Upon a hot summer's day to enter a room in a rear house whose walls are cracked and besmeared with refuse, and perhaps dead vermin, occupied by a family of six or eight, harboring three or four boarders, upon the floor of which might be seen soiled linen, particles of food, and children, with a mother standing above the red-hot stove, washing and cooking, and perhaps attending to a sick child lying in a dark bed-room, suffering from cholera infantum, diphtheria or scarlet fever, was an experience not infrequently met with by me." Another thus described one of the scenes he constantly met with: "In the small yard of a rear tenement, groups of sickly children were seen playing around an almost open cess-pool, a so called 'school sink.' These children have characteristic appearances; they are stunted in growth, pale, and, as a rule, have some form of ophthalmia. Rheumatism is also a frequent visitor to these miserable abodes, and leaves in many of those who survive, some form of heart disease."

One of the greatest advantages of a house to house service, such as that in question, is that by this means cases of incipient disease, particularly of a diarrhœal character, are often met with and relieved, which would otherwise have been allowed to go on without medical care until a stage had been reached when all treatment would be likely to prove hopeless.

NEW YORK, July 15, 1887.

ABSTRACT OF THE REPORT OF THE COMMITTEE OF INQUIRY INTO M. PASTEUR'S TREATMENT OF HYDROPHOBIA.

The report opens with a statement of the methods by which the inquiry was conducted, and then proceeds to give the facts and conclusions.

The experiments by Mr. Horsley entirely confirm M. Pasteur's discovery of a method by which animals may be protected from the infection of rabies. The general facts proved by them may be thus stated:

If a dog or other animal be bitten by a rabid dog and die of rabies, a substance can be obtained from its spinal cord which, being inoculated into a healthy animal, will produce rabies similar to that which would have followed directly from the bite of a rabid animal, or differing only in that the period of incubation between the inoculation and the appearance of the characteristic symptoms may be altered. Rabies thus transmitted by inoculation may, similarly, be transmitted through a succession of rabbits with marked increase of intensity. The virus in the spinal cords of rabbits that have died

of inoculated rabies may be gradually so weakened or attenuated, by drying the cords in a pure and dry atmosphere at a temperature of 20 C., the manner devised by M. Pasteur, that, after a certain number of days' drying, it may be injected into healthy animals without any danger of producing rabies. By using, on each successive day, the virus from a spinal cord dried during a period shorter than that used on the previous day, an animal may be made almost certainly secure against rabies, whether from the bite of a rabid animal, or from any method of subcutaneous inoculation. The protection from rabies thus secured is proved by the fact that, if some animals thus protected and others not thus protected be bitten by the same rabid dog, none of the first set will die of rabies, and, with rare exceptions, all of the second set will so die. In proof of this, the following experiment was performed: Six dogs were protected by injecting subcutaneously the emulsions of spinal cords of rabbits which had died of rabies, beginning with that of a cord which had been dried for fourteen days, and on each following day using that of a cord which had been dried for one day less, till at last that from a fresh cord was used. None of the dogs suffered from the injections. The six protected dogs with two unprotected, and some unprotected rabbits, were then bitten by rabid dogs or by a rabid cat. All of the unprotected animals died of rabies. The protected dogs survived; one of them which had been frequently bitten subsequently died, but not from rabies.

It may, hence, be deemed certain that M. Pasteur has discovered a method of protection from rabies comparable with that which vaccination affords against infection from small-pox. It would be difficult to over-estimate the importance of the discovery, whether for its practical utility or for its application in general pathology. It shows a new method of inoculation, or, as M. Pasteur sometimes calls it, of vaccination, the like of which it may become possible to employ for protection of both men and domestic animals against others of the most intense kinds of virus. The duration of the immunity from rabies which is conferred by inoculation is not yet determined; but during the two years that have passed since it was first proved, there have been no indications of its being limited.

That an animal may, by progressive inoculations, be protected from rabies suggested to M. Pasteur that if any animal or any person. though unprotected, were bitten by a rabid dog, the fatal influence of the virus might be prevented by a timely series of similar progressive inoculations. He has accordingly inoculated a very large number of persons believed to have been bitten by rabid animals. To ascertain the amount of success in these cases with numerical accuracy, several factors are required which it is not possible to obtain.

1. It is often difficult, and sometimes impossible, to ascertain whether the animals by which people were bitten were really rabid.

2. The probability of hydrophobia occurring in persons bitten by

dogs that were certainly rabid depends on the number and character of the bites; whether they are on the face or hands or other naked parts; if they have been inflicted on parts covered with clothes, their effects may depend on the texture of the clothes, and the extent to which they are torn. The amount of bleeding from the wounds affects the probability of absorption of virus.

3. In all cases, the probability of infection may be affected by speedy cauterising or excision of the wounded parts, or by other methods of treatment.

4. The bites of different species of animals, and even of different dogs, are unequally dangerous. It is certain that the bites of rabid wolves, and probable that those of rabid cats, are far more dangerous than those of rabid dogs.

The amount of uncertainty due to these and other causes may be expressed by the fact that the percentage of deaths among persons who have been bitten by dogs believed to have been rabid, and who have not been inoculated or otherwise treated, has been, in some groups of cases, estimated at the rate of only 5 per cent., in others at 60 per cent., and in others at various intermediate rates. The mortality from the bites of rabid wolves, also, has been, in different instances, estimated at from 30 to 95 per cent. To ascertain, as far as possible, the influence of these sources of fallacy in cases inoculated by M. Pasteur, the names of ninety persons were taken from his note-books. No selection was made, except that the names were taken from his earliest cases, in which the periods since inoculation were longest, and from those of persons living within reach in Paris, Lyons and St. Etienne. Among the 90 cases there were 24 in which the patients were bitten on naked parts by undoubtedly rabid dogs, and the wounds were not cauterised or treated in any way likely to have prevented the action of the virus; there were 31 in which there was no clear evidence that the dog was rabid; others in which the bite, though inflicted by undoubtedly rabid animals, having been through clothes, may thus have been rendered harmless. Among these, therefore, it is probable that, even if they had not been inoculated, few would have died. Still, the results observed in the total of the 90 cases may justly be compared with those observed in large numbers of cases similar to these as regards the uncertainties of infection, but not inoculated. The estimates published as to the mortalities in such unassorted cases are, as we have said, widely various. We believe that among the 90 persons, including the 24 bitten on naked parts, not less than eight would have died if they had not been inoculated. At the time of the inquiry, in April and May, 1886, which was at least eighteen weeks since the treatment of the bites, not one had shown any signs of hydrophobia, nor has anyone of them since died of that disease. Thus, the personal investigation of M. Pasteur's cases by members of the Committee was, so far as it went, entirely satisfactory, and convinced them of the perfect accuracy of his records.

It might, therefore, be deemed unjust to estimate the total value of his treatment in the whole of his cases as being more than is represented by the difference between the rate of mortality observed in them and the lowest rate observed in any large number of cases not inoculated. The lowest rate estimated in those not inoculated may be taken at 5 per cent. Between October, 1885, and the end of December, 1886, M. Pasteur inoculated 2682 persons. Of the whole number, at the rate of 5 per cent., at least 130 should have died, At the end of 1886, the number of deaths was 31, including seven bitten by wolves, in three of whom the symptoms of hydrophobia appeared while they were under treatment, and before the series of inoculations were complete. Since 1886 two more of those inoculated in that year have died of hydrophobia. The number of deaths assigned by those who have sought to prove the inutility of M. Pasteur's treatment is, as nearly as we can ascertain, 40 out of the 2682; and in this number are included the seven deaths from bites by wolves, and probably not less than four in which it is doubtful whether the deaths were due to hydrophobia or to some other disease. Making fair allowance for uncertainties and for questions which cannot now be settled, we believe it sure that, excluding the deaths after bites by rabid wolves, the proportion of deaths in the 2634 persons bitten by other animals was between 1 and 1.2 per cent., a proportion far lower than the lowest estimated among those not submitted to M. Pasteur's treatment, and showing, even on this lowest estimate, the saving of not less than 100 lives. The evidence of the utility of M. Pasteur's method, indicated by these numbers, is confirmed by the results obtained in certain groups of his cases. Of 233 persons bitten by animals in which rabies was proved, either by inoculation from their spinal cords, or by the occurrence of rabies in other animals or in persons bitten by them, only four died. Without inoculation it would have been expected that at least 40 would have died, Among 186 bitten on the head or face by animals in which rabies was proved by experimental inoculations or was observed by veterinary surgeons, only nine died, instead of at least 40. And of 48 bitten by rabid wolves only nine died; while, without the preventive treatment, the mortality, according to the most probable estimates yet made, would have been nearly 30. Between the end of last December and the end of March, M. Pasteur inoculated 509 persons bitten by animals proved to have been rabid, either by inoculation with their spinal cords, or by the deaths of some of those bitten by them, or as certified by veterinary surgeons. Only two have died, and one of these was bitten by a wolf a month before inoculation, and died after only three days' treatment. If we omit half of the cases as being too recent, the other 250 have had a mortality of less than 1 per cent., instead of 20 or 30 per cent.

From the evidence of all these facts, we think it certain that the inoculations practised by M. Pasteur on persons bitten by rabid

animals have prevented the occurrence of hydrophobia in a large proportion of those who, if they had not been so inoculated, would have died of that disease. And we believe that the value of his discovery will be found much greater than can be estimated by its present utility, for it shows that it may become possible to avert by inoculation, even after infection, other diseases besides hydrophobia. Some have, indeed, thought it possible to avert small-pox by vaccinating those very recently exposed to its infection; but the evidence of this is, at the best, inconclusive; and M. Pasteur's may justly be deemed the first proved method of overtaking and suppressing by inoculation a process of specific infection. His researches have also added very largely to the knowledge of the pathology of hydrophobia and have supplied what is of the highest practical value, namely, a sure means of determining whether an animal, which has died under suspición of rabies, was really affected with that disease or not.

The question has been raised whether M. Pasteur's treatment can be submitted to without danger to health or life; and in answering it, it is necessary to refer to two different methods of inoculation which he has practised. In the first, which may be called the ordinary method, and which has been employed in the very large majority of cases, the preventive material obtained from the spinal cords of rabbits that have died of rabies derived, originally, from rabid dogs is injected under the skin, once a day for ten days, in gradually increasing strengths. In the second or intensive method which M. Pasteur adopted for the treatment of cases deemed especially urgent, on account either of the number and position of the bites or of the long time since their infliction, the injections, gradually increasing in strength, were usually made three times on each of the first three days, then once daily for a week, and then in different degrees of frequency for some days more. The highest strength of the injections used in this method was greater than the highest used in the ordinary method, and was such as, if used at first and without the previous injections of less strength, would certainly produce rabies.

By the first or ordinary method, there is no evidence or probability that anyone has been in danger of dying, or has in any degree suffered in health even for any short time. But after the intensive method, deaths have occurred under conditions which have suggested that they were due to the inoculations rather than to the infection from the rabid animal. There is ample reason to believe that, in many of the most urgent cases, the intensive method was more efficacious than the ordinary method would have been. Thus, M. Pasteur mentions that, of 19 Russians bitten by rabid wolves, three treated by the erdinary method died, and the remaining 16, treated by the intensive method, survived; and he contrasts the cases of six children, severely bitten on the face, who died after the ordinary treatment, with those of 10 similarly bitten children who

were treated by the intensive method, and of whom none died; and M. Vulpian reports, that of 186 persons badly bitten by animals that were most probably rabid, 50 treated by the intensive method survived, and of the remaining 136 treated by the ordinary method, nine died. The rate of mortality after the intensive method was not greater than that after the ordinary method: for among 624 patients thus treated, only six died, or, counting one doubtful case, seven. But that which excited suspicion was the manner of death in some of them. The question is likely to remain undecided; for to avoid the possible, however improbable, risk of his intensive treatment, M. Pasteur has greatly modified it, and even in this modified form employs it in none but the most urgent cases.

BOOKS AND PAMPHLETS RECEIVED.

Announcement of the First Session of the Gross Medical College of Denver.

The term will commence in September and end in April, a continuous course of seven months. A three years' graded course is recommended for graduation, and for matriculation there must be "satisfactory evidence of a fair English education in default of a diploma from some college," etc. Amongst the motives which suggested the foundation of the Gross Medical College is that which led to the establishment of the Medical Department of the University of Southern California, namely, that students who were unable through ill health to pursue their studies in less favored climates could there complete them satisfactorily.

Annual Meteorological Review of the State of California during the year 1886 by the Meteorological Department of the State Agricultural Society. Collected and compiled by James A. Barwick, Sergeant U. S. S. C., and Meteorologist to the State Board of Agriculture. Sacramento: State Printing Office, 1887.

A brief review of this work would be impossible. It is sufficient to say that it presents in a concise tabular form the most valuable information to be obtained, regarding the meteorology of this Coast.

Register of the University of California, Session 1886–87.

Pulmonary Phthisis. By Albert Abrams, M. D., San Francisco, Cal. Being the Report of the Committee on Microscopy and Histology. [Reprinted from the Transactions of the Medical Society of the State of California for the years 1886–87.]

Licentiates of the Board of Examiners.

At the regular meeting of the Board of Examiners held July 6, 1887, the following physicians were granted certificates to practise medicine and surgery in this State:

Myron H. Alter, Los Angeles; Coll. Phys. and Surgs., Baltimore, Mar. 6, '78.

David M. Angus, Vallejo; Long Island M. Coll. Hosp., N. Y., June 2, '86.

William D. Babcock, Los Angeles; Medical Coll. of Evansville, Ind., Feb. 27, '78.

Walter M. Boyd, Los Angeles; Columbus M. Coll., O., Mar. 1, '83.

Wm. Lang Chapman, San Francisco; Coll. of Phys. and Surgs., N. Y., May 16, '82.

G. Del. Amo,, Los Angeles; Faculty of M. Univ. of Madrid, Spain, Feb. 2, '79.

Adam Tribe Dickson, Sacramento; Royal Coll. of Phys., Edinburgh, May 7, '79, and Phys. and Surgs., Glasgow, Nov. 9, '70.

Herman W. Fenner, Los Angeles; M. Coll. of Ohio, Mar. 1, '81.

Hiram Paul Hugus, Los Angeles; Long Island Hosp. Coll., N. Y., June 29, '65.

Theodore F. Johnson, National City; Chicago M. Coll., Ill., Mar. 20, '77.

George Lewis Marion, Los Angeles; Rush M. Coll., Chicago, Ill., Feb. 16, '86.

Francis P. McGovern, San Francisco; State Univ. of Iowa, Mar. 2, '87.

Thos. D. Nichols, Riverside; Univ. of Louisville, Ky., Feb. 28, '78.

J. Taylor Stewart, Monrovia; Jefferson M. Coll., Penn., Mar. 12, '78.

John J. Still, Los Angeles; Bellevue Hosp. M. Coll., N. Y., Mar. 9, '85.

Abraham A. Sulcer, Riverside; Rush M. Coll., Ill., Jan. 24, '86.

Sidney Brown Swift, San Jose; Texas M. Coll. Hosp., Mar. 3, '80.

David B. Van Slyck, Pasadena; M. Dep. Univ. of Buffalo, N. Y., Feb. —, '52.

Theoda Wilkins, Los Angeles; Women's M. Coll. N. Y. Infirmary, May 27, '85.

WM. M. LAWLOR, Secretary.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT OF THE U. S. ARMY (DIVISION OF THE PACIFIC), FROM JUNE 20 TO JULY 21, 1887.

Leave of absence for one month, with permission to apply for an extension of one month, is granted Asst. Surgeon J. L. Ord. S. O. No. 76, Dept. Arizona, July 21, 1887.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS, U. S. NAVY (PACIFIC STATION), FROM JUNE 20 TO JULY 20, 1887.

P. A. Surgeon W. G. G. Wilson, reported for duty on U. S. Receiving Ship Independence. July 1st.

P. A. Surgeon C. W. Deane, detached from Naval Hospital, Mare Island, Cal., and ordered to report for duty at Marine Rendezvous, San Francisco, Cal. July 9th.

Asst. Surgeon H. N. T. Harris, reported for duty at Naval Hospital, Mare Island, Cal. July 10th.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE (DISTRICT OF THE PACIFIC) FROM JUNE 20 TO JULY 20, 1887.

Asst. Surgeon W. D. Bratton, relieved from temporary duty at Marine Hospital, Port Townsend, W. T., and ordered to rejoin station at San Francisco, Cal.

P. A. Surgeon Spencer E. Devan, ordered to rejoin station (Port Townsend, W. T.) upon expiration of leave of absence. May 28th, 1887.

Public Health.

Reports from Cities on the Pacific Coast of 10,000 inhabitants and upwards, for the Month of June, 1887.

Cities.	Population.	Annual Rate per 1000 for the month.	Total Deaths.	Zymotic Diseases.	Constitutional Diseases.	Local Diseases.	Developmental Diseases.	Violent Deaths.	Natural Causes.	Unclassified.
Los Angeles.....	40,000	12.00	40	6	8*	9	5	2	...	10
Oakland.....	49,000	16.65	68	16	12	24	11	2	....	3
Sacramento	30,000	10 40	26	7	....	12	1	3	....	3
San Francisco.....	280,000	17.50	409	62	105	162	38	26	16	....
San Jose.....	20,000	10.50	18	4	3	7	....	1	2	1
Stockton	15,000	7.20	9	1	1	3	2	2	....	....

* Non-residents.

Meteorological Summary for the Month of June, 1887.

Stations.		Temperature.				Rainfall.		Weather.			Wind.	Furnished by.
		Highest.	Lowest.	Mean.	Mean daily Range.	No. days Rain fell	Total Rainfall.	No. of Days Clear.	Fair.	Cl'dy.	Prevailing direction	
Auburn,	Cal	106	50	71.3	——	0	.00	—	—	—	W.	Southern Pacific Co.
Colfax,	"	104	44	69.5	——	0	.00	—	—	—	N.	" "
Eureka,	"	63.7	39.7	52.7	11.1	3	1.92	9	14	7	N.W.	Signal Service U.S.A.
Los Angeles,	"	100.1	46.7	66.1	26.8	1	.07	17	9	4	W.	" "
Monterey,	"	80	55	62.0	——	——	.05	—	—	—	N.W.	Southern Pacific Co.
Oakland,	"	85	48	59.6	13.8	2	.05	25	—	5	S. W.	J. B. Trembley M. D.
Paso Robles,	"	98	48	70.6	——	0	.00	—	—	—	S.	Southern Pacific Co.
Red Bluff,	"	105.2	47.6	77.1	27.4	4	.26	18	11	1	N.	Signal Service U.S.A.
Sacramento,	"	100.0	47.0	69.1	29.4	0	.00	24	6	0	S. W.	" "
San Diego,	"	78.0	54.0	64.6	10.6	1	.04	8	17	5	N.W.	" "
San Francisco,	"	90.0	48.5	58.0	15.4	1	.07	13	15	2	W.	" "
Santa Barbara,	"	95†	44‡	63.7	18.9	2	.03	—	—	—	——	Hugh D. Vail, Esq.
Santa Cruz,	"	83	50	63.9	——	0	.00	—	—	—	W.	Southern Pacific Co.

Dash (——) indicates reports missing.

Clear Day—One on which cloudiness is 3 or less on a scale of 10.
Fair Day—One on which cloudiness is from 3 to 7.
Cloudy Day—One on which cloudiness is over 7.

† Mean of that day 79° ‡ 59°